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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,147	01/23/2004	Anurag Gupta	20040126-1	8140

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EXAMINER	
BLACKMAN, ROCHELLE ANN J	
ART UNIT	**PAPER NUMBER**
2851	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/764,147	GUPTA ET AL.	
	Examiner	Art Unit	
	Rochelle Blackman	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,5,12,15,16,23,25 and 27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,5,12,15,16,23,25 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1, 4, 5, 12, 15, 16, 23, 25, and 27 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 5, 12, 16, 23, 25, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kane (U.S. Patent Application Publication No. 2003/0117708).

Regarding claim 1, Kane discloses a method (see function of elements in FIG. 2) for enhancing contrast in a digital projector, comprising: positioning a first optical component (see 21 of Fig. 2) and a second optical (see 23 of Fig. 2) component along a light path (elements 21 and 23 are elements that make element 20, which is a wire grid polarizer and wire-grid polarizers are used in projectors and generally positioned along light paths in projectors), said first optical component and said second optical component being separated by a gap (see 26 of Fig. 2); sealing a perimeter of said gap

with a sealant (see 25 of Fig. 2) to form a sealed gap, said sealant being positioned around said light path (see location of 25 in Fig. 2, the sealant is located on the furthest ends of "optical components" 21 and 23, so it is considered to positioned around the light path); and evacuating said gap wherein said sealing and said evacuating provide substantially a vacuum (see *vacuum* in paragraph [0022] on pg. 2, and also see paragraphs [0024]-[0025], interior atmosphere or "gap" 26 is considered to be provided with same type of atmosphere as enclosure 16 in Fig. 1) in said gap.

Regarding claims 5 and 16, Kane discloses wherein said sealant is positioned substantially along a perimeter of at least one of said first and second optical components (also see location of 25 relative to "optical ein Fig. 2).

Regarding claim 12, Kane discloses a system (see Fig. 2) for enhancing contrast in a digital projector, comprising: a first optical component (see 21 of Fig. 2) and a second optical component (see 23 of Fig. 2) positioned along a light path (elements 21 and 23 are elements that make element 20, which is a wire grid polarizer and wire-grid polarizers are used in projectors and generally positioned along light paths in projectors) and being separated by a gap (see 26 of Fig. 2), said gap containing substantially a vacuum therein (see *vacuum* in paragraph [0022] on pg. 2, and also see paragraphs [0024]-[0025], interior atmosphere or "gap" 26 is considered to be provided with same type of atmosphere as enclosure 16 in Fig. 1); and a sealant (see 25 of Fig. 2) adapted to seal said gap substantially along a perimeter of said gap (see location of 25 in Fig. 2), said sealant being positioned around said light path (the sealant is located at the

furthest ends of "optical components" 21 and 23, so it is considered to positioned around the light path).

Regarding claims 23, 25 and 27, the "system for enhancing contrast in a digital projector" and the "digital project" are similarly met by the above-mentioned elements for the "system for enhancing a digital projector" of claim 12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4, 5, 12, 15, 16, 23, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano et al. (U.S. Patent No. 6,795,243) in view of Kane (U.S. Patent Application Publication No. 2003/0117708).

Regarding claim 1, Kawano discloses a method (see function of elements in FIG. 3) for enhancing contrast in a digital projector, comprising: positioning a first optical component (see 61 of FIG. 3) and a second optical component (see 50 of FIG. 3) along a light path (see arrows and C2 in FIG. 3), said first optical component and said second optical component being separated by a gap (see location of 64 in FIG. 3); and sealing a perimeter of said gap with a sealant (see 64 of FIG. 3) to form a sealed gap, said sealant being positioned around said light path (see location of 64, the sealant is also

located on the furthest ends of "optical elements" 50 and 61, so it is considered to positioned around the light path).

Regarding claims 4 and 15, Kawano discloses wherein said first optical component is a digital micro-mirror device cover plate (see 61 of FIG. 3) and said second optical component is a total internal reflection prism (see 50 of FIG. 3).

Regarding claims 5 and 16, Kawano discloses wherein said sealant is positioned substantially along a perimeter of at least one of said first and second optical components (see location of 64 relative to 50 and 61).

Regarding claim 12, Kawano discloses a system (see FIG. 3) for enhancing contrast in a digital projector, comprising: a first optical component (see 61 of FIG. 3) and a second optical component (see 50 of FIG. 3) positioned along a light path (see arrows and C2 in FIG. 3) and being separated by a gap (see location of 64 in FIG. 3); and a sealant (see 64 of FIG. 3) adapted to seal said gap substantially along a perimeter of said gap (see location of 25 in Fig. 2), said sealant being positioned around said light path (the sealant is also located at the furthest ends of "optical components" 50 and 61, so it is considered to positioned around the light path).

Regarding claims 23, 25 and 27, the "system for enhancing contrast in a digital projector" and the "digital project" are similarly met by the above-mentioned elements for the "system for enhancing a digital projector" of claim 12.

Regarding claims 1, 12, 23, 25, and 27, Kawano does not appear to disclose "evacuating said gap wherein said sealing and said evacuating provide substantially a

vacuum in said sealed gap" and/or said gap containing "substantially a vacuum therein" and/or said gap having a "substantial vacuum therein".

Kane teaches providing evacuating a gap wherein sealing and evacuating provide substantially a vacuum in a sealed gap and/or a gap containing substantially a vacuum therein and/or a gap having a substantial vacuum therein (see *vacuum* in paragraph [0022] on pg. 2, and also see paragraphs [0024]-[0025], interior atmosphere or "gap" 26 is considered to be provided with same type of atmosphere as enclosure 16 in Fig. 1).

It would have been obvious to one ordinary skill in the art at the time the invention was made to evacuate the gap wherein the sealing and evacuating provide substantially a vacuum in the sealed gap and/or provide a gap containing substantially a vacuum therein and/or a gap having a substantial vacuum therein in the Kawano reference, as taught by Kane for the purpose of providing an enclosure between the optical components, that maintains a non-reactive atmosphere to protect the optical components from the ambient environment, thus providing environmentally sensitive optical components (see pg. 1, paragraphs [0012]-[0013]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RB

William Perkey
Primary Examiner